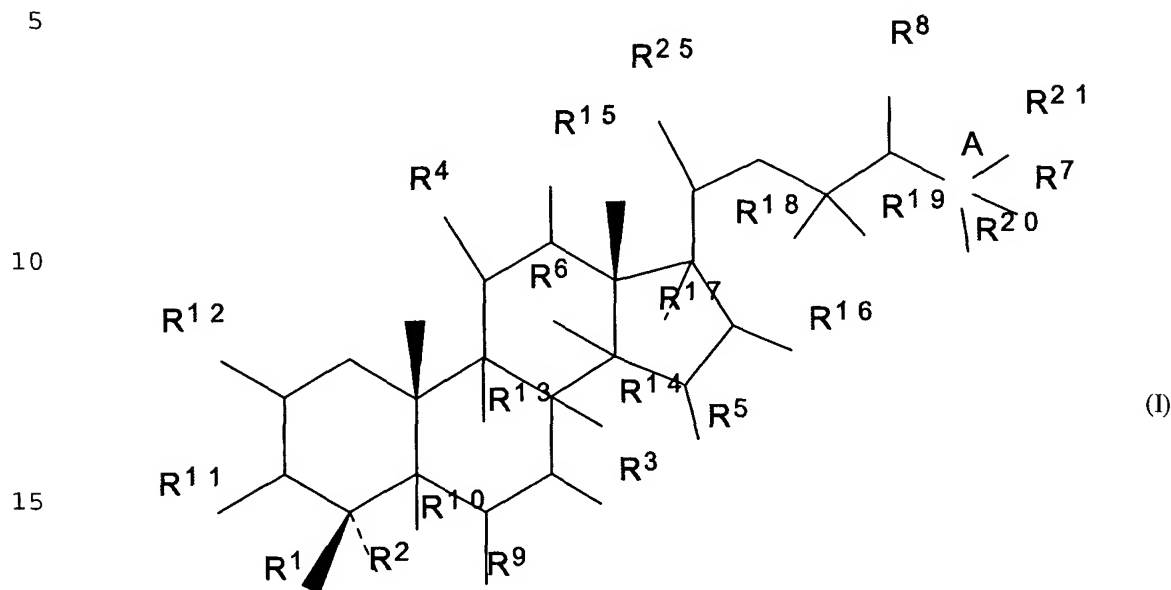


What is claimed is:

1. A method of regulating meiosis in a mammalian germ cell comprising administering to a germ cell in need of such regulation, an effective amount of a compound of formula (I)



20

wherein R^1 and R^2 , independently, are selected from the group consisting of hydrogen and branched or unbranched C_1 - C_6 alkyl which may be substituted by halogen, hydroxy or cyano, or wherein R^1 and R^2 together designate methylene or, together with the carbon atom to which they are bound, form a cyclopropane ring, a cyclopentane ring, or a cyclohexane ring; R^3 is selected from the group consisting of hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, $=NOR^{26}$ wherein R^{26} is hydrogen or C_1 - C_3 alkyl, halogen, and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^3 designates, together with R^9 or R^{14} , an additional bond between the carbon atoms to which R^3 and R^9 or R^{14} are bound; R^4 is selected from the group consisting of hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, $=NOR^{27}$ wherein R^{27} is hydrogen or C_1 - C_3 alkyl, halogen, and hydroxy and C_1 - C_4 alkyl

25

30 bound to the same carbon atom of the sterol skeleton, or R^4 designates, together with R^{13} or R^{15} , an

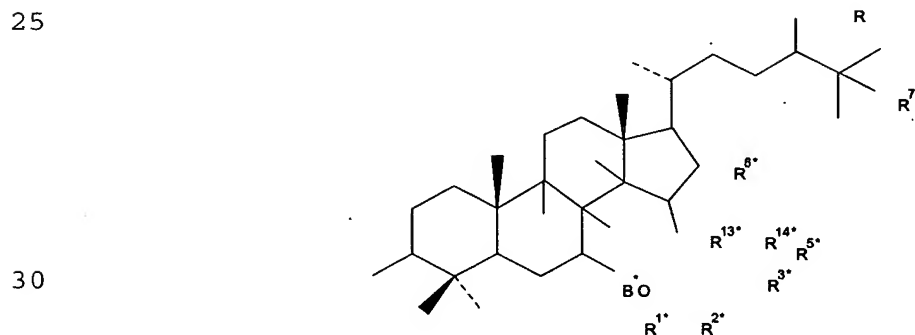
additional bond between the carbon atoms to which R^4 and R^{13} or R^{15} are bound; R^5 is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy, methoxy, oxo, and $=NOR^{22}$ wherein R^{22} is hydrogen or C_1 - C_3 alkyl, or R^5 designates, together with R^6 , an additional bond between the carbon atoms to which R^5 and R^6 are bound; R^6 is hydrogen or R^6 designates, together with R^5 , an additional bond between the carbon atoms to which R^5 and R^6 are bound; R^9 is hydrogen or R^9 designates, together with R^3 or R^{10} , an additional bond between the carbon atoms to which R^9 and R^3 or R^{10} are bound; R^{10} is hydrogen or R^{10} designates, together with R^9 , an additional bond between the carbon atoms to which R^{10} and R^9 are bound; R^{11} is selected from the group consisting of hydroxy, alkoxy, substituted alkoxy, acyloxy, sulphonyloxy, phosphonyloxy, oxo, $=NOR^{28}$ wherein R^{28} is hydrogen or C_1 - C_3 alkyl, halogen and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^{11} designates, together with R^{12} , an additional bond between the carbon atoms to which R^{11} and R^{12} are bound; R^{12} is selected from the group consisting of hydrogen, C_1 - C_3 alkyl, vinyl, C_1 - C_3 alkoxy and halogen, or R^{12} designates, together with R^{11} , an additional bond between the carbon atoms to which R^{12} and R^{11} are bound; R^{13} is hydrogen or R^{13} designates, together with R^4 or R^{14} , an additional bond between the carbon atoms to which R^{13} and R^4 or R^{14} are bound; R^{14} is hydrogen or R^{14} designates, together with R^3 , R^6 or R^{13} , an additional bond between the carbon atoms to which R^{14} and R^3 or R^6 or R^{13} are bound; R^{15} is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy, methoxy, acetoxy, oxo, and $=NOR^{23}$ wherein R^{23} is hydrogen or C_1 - C_3 alkyl, or R^{15} designates, together with R^4 , an additional bond between the carbon atoms to which R^{15} and R^4 are bound; R^{16} is selected from the group consisting of hydrogen, C_1 - C_3 alkyl, methylene, hydroxy, methoxy, oxo and $=NOR^{24}$ wherein R^{24} is hydrogen or C_1 - C_3 alkyl, or R^{16} designates, together with R^{17} , an additional bond between the carbon atoms to which R^{16} and R^{17} are bound; R^{17} is hydrogen or hydroxy or R^{17} designates, together with R^{16} , an additional bond between the carbon atoms to which R^{17} and R^{16} are bound; R^{18} and R^{19} are, independently, hydrogen or fluoro; R^{25} is selected from the group consisting of hydrogen, C_{1-4} alkyl, methylene, hydroxy and oxo; A is a carbon atom or a nitrogen atom; when A is a carbon atom, R^7 is selected from the group consisting of hydrogen, hydroxy and fluoro, and R^8 is selected from the group

- consisting of hydrogen, C₁-C₄ alkyl, methylene and halogen, or R⁷ designates, together with R⁸, an additional bond between the carbon atoms to which R⁷ and R⁸ are bound; R²⁰ is selected from the group consisting of C₁-C₄ alkyl, trifluoromethyl and C₃-C₆ cycloalkyl and R²¹ is selected from the group consisting of C₁-C₄ alkyl, C₁-C₄ hydroxyalkyl, C₁-C₄ haloalkyl containing up to three halogen atoms, methoxymethyl, acetoxymethyl, and C₃-C₆ cycloalkyl, or R²⁰ and R²¹, together with the carbon atom to which they are bound, form a C₃-C₆ cycloalkyl ring; and when A is a nitrogen atom, R⁷ designates a lone pair of electrons and R⁸ is selected from the group consisting of hydrogen, C₁-C₄ alkyl and oxo; R²⁰ and R²¹ are, independently, C₁-C₄ alkyl or C₃-C₆ cycloalkyl; provided that the compound of formula (I) does not have any cumulated double bonds and further provided that the compound is not one of the following compounds:
- Cholest-7-ene-3 β -ol;
4-Methylcholest-7-ene-3 β -ol;
4-Ethylcholest-7-ene-3 β -ol;
4,4-Dimethylcholest-7-ene-3 β -ol;
4 α -Methyl-4 β -ethylcholest-7-ene-3 β -ol;
4 α -Ethyl-4 β -methylcholest-7-ene-3 β -ol;
4,4-Diethylcholest-7-ene-3 β -ol;
4-Propylcholest-7-ene-3 β -ol;
4-Butylcholest-7-ene-3 β -ol;
4-Isobutylcholest-7-ene-3 β -ol;
4,4-Tetramethylencholest-7-ene-3 β -ol;
4,4-Pentamethylencholest-7-ene-3 β -ol;
Cholest-8-ene-3 β -ol;
4-Methylcholest-8-ene-3 β -ol;
4-Ethylcholest-8-ene-3 β -ol;
4,4-Dimethylcholest-8-ene-3 β -ol;
4 α -Methyl-4 β -ethylcholest-8-ene-3 β -ol;
4 α -Ethyl-4 β -methylcholest-8-ene-3 β -ol;
4,4-Diethylcholest-8-ene-3 β -ol;
4-Propylcholest-8-ene-3 β -ol;

- 4-Butylcholest-8-ene-3 β -ol;
4-Isobutylcholest-8-ene-3 β -ol;
4,4-Tetramethylencholest-8-ene-3 β -ol;
4,4-Pentamethylencholest-8-ene-3 β -ol;
5 Cholest-8(14)-ene-3 β -ol;
4-Methylcholest-8(14)-ene-3 β -ol;
4-Ethylcholest-8(14)-ene-3 β -ol;
4,4-Dimethylcholest-8(14)-ene-3 β -ol;
4 α -Methyl-4 β -ethylcholest-8(14)-ene-3 β -ol;
10 4 α -Ethyl-4 β -methylcholest-8(14)-ene-3 β -ol;
4,4-Diethylcholest-8(14)-ene-3 β -ol;
4-Propylcholest-8(14)-ene-3 β -ol;
4-Butylcholest-8(14)-ene-3 β -ol;
4-Isobutylcholest-8(14)-ene-3 β -ol;
15 4,4-Tetramethylencholest-8(14)-ene-3 β -ol;
4,4-Pentamethylencholest-8(14)-ene-3 β -ol;
Cholesta-8,14-diene-3 β -ol;
4-Methylcholesta-8,14-diene-3 β -ol;
4-Ethylcholesta-8,14-diene-3 β -ol;
20 4,4-Dimethylcholesta-8,14-diene-3 β -ol;
4 α -Methyl-4 β -ethylcholesta-8,14-diene-3 β -ol;
4 α -Ethyl-4 β -methylcholesta-8,14-diene-3 β -ol;
4,4-Diethylcholesta-8,14-diene-3 β -ol;
4-Propylcholesta-8,14-diene-3 β -ol;
25 4-Butylcholesta-8,14-diene-3 β -ol;
4-Isobutylcholesta-8,14-diene-3 β -ol;
4,4-Tetramethylencholesta-8,14-diene-3 β -ol;
4,4-Pentamethylencholesta-8,14-diene-3 β -ol;
Cholesta-8,24-diene-3 β -ol;
30 4-Methylcholesta-8,24-diene-3 β -ol;
4-Ethylcholesta-8,24-diene-3 β -ol;
4,4-Dimethylcholesta-8,24-diene-3 β -ol;

- 4 α -Methyl-4 β -ethylcholesta-8,24-diene-3 β -ol;
4 α -Ethyl-4 β -methylcholesta-8,24-diene-3 β -ol;
4,4-Diethylcholesta-8,24-diene-3 β -ol;
4-Propylcholesta-8,24-diene-3 β -ol;
5 4-Butylcholesta-8,24-diene-3 β -ol;
4-Isobutylcholesta-8,24-diene-3 β -ol;
4,4-Tetramethylencholesta-8,24-diene-3 β -ol;
4,4-Pentamethylencholesta-8,24-diene-3 β -ol;
Cholesta-8,14,24-triene-3 β -ol;
10 4-Methylcholesta-8,14,24-triene-3 β -ol;
4-Ethylcholesta-8,14,24-triene-3 β -ol;
4,4-Dimethylcholesta-8,14,24-triene-3 β -ol;
4 α -Methyl-4 β -ethylcholesta-8,14,24-triene-3 β -ol;
4 α -Ethyl-4 β -methylcholesta-8,14,24-triene-3 β -ol;
15 4,4-Diethylcholesta-8,14,24-triene-3 β -ol;
4-Propylcholesta-8,14,24-triene-3 β -ol;
4-Butylcholesta-8,14,24-triene-3 β -ol;
4-Isobutylcholesta-8,14,24-triene-3 β -ol;
4,4-Tetramethylencholesta-8,14,24-triene-3 β -ol; and
20 4,4-Pentamethylencholesta-8,14,24-triene-3 β -ol;
and esters and ethers thereof.

2. The method of claim 1, provided that it is not a compound of formula (II)



(II)

wherein R^{1*} and R^{2*} , independently, are selected from the group consisting of hydrogen, branched or unbranched C_1 - C_6 alkyl which may be substituted by halogen or hydroxy or wherein R^{1*} and R^{2*} ,

5 together with the carbon atom to which they are bound, form a cyclopentane ring or a cyclohexane ring; R^{13*} and R^{14*} together designate an additional bond between the carbon atoms to which they are bound in which case R^{3*} is hydrogen and R^{6*} and R^{5*} are either hydrogen or together they designate an additional bond between the carbon atoms to which they are bound; or R^{3*} and R^{14*} together designate an additional bond between the carbon atoms to which they are bound in which case R^{13*} is hydrogen and R^{6*} and R^{5*}
10 are either hydrogen or together they designate an additional bond between the carbon atoms to which they are bound; or R^{6*} and R^{14*} together designate an additional bond between the carbon atoms to which they are bound in which case R^{13*} , R^{3*} and R^{5*} are all hydrogen; R^{8*} and R^{7*} are hydrogen or together they designate an additional bond between the carbon atoms to which they are bound; and B^* is either hydrogen or an acyl group, or a group which together with the remaining part of the molecule forms an ether.

15

3. The method of claim 1, wherein R^1 and R^2 are both hydrogen; both methyl; one is hydrogen and the other is methyl; or together designate methylene, or wherein R^1 and R^2 , together with the carbon atom to which they are bound, form a cyclopropane ring, a cyclopentane ring, or a cyclohexane ring.

20 4. The method of claim 1, wherein R^1 is branched or unbranched C_1 - C_6 alkyl, optionally substituted by halogen, hydroxy or cyano, and wherein R^2 is branched or unbranched C_1 - C_6 alkyl, optionally substituted by halogen, hydroxy or cyano.

5. The method of claim 1, wherein R^3 is hydrogen, methylene, hydroxy, methoxy, acetoxy, halogen, oxo,
25 $=NOH$, or wherein R^3 is $=NOR^{26}$ and R^{26} is C_1 - C_3 alkyl, or wherein R^3 is hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton.

6. The method of claim 1, wherein R^3 , together with R^9 , designates an additional bond between the

carbon atoms to which R^3 and R^9 are bound, or wherein R^3 , together with R^{14} , designates an additional bond between the carbon atoms to which R^3 and R^{14} are bound.

7. The method of claim 1, wherein R^4 is hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, =NOH, =NOR²⁷, wherein R^{27} is C₁-C₃ alkyl, or wherein R^4 is hydroxy and C₁-C₄ alkyl bound to the same carbon atom of the sterol skeleton, or wherein R^4 , together with R^{13} , designates an additional bond between the carbon atoms to which R^4 and R^{13} are bound, or wherein R^4 , together with R^{15} , designates an additional bond between the carbon atoms to which R^4 and R^{15} are bound.

8. The method of claim 1, wherein R^5 is hydrogen, C₁-C₄ alkyl, methylene, hydroxy, methoxy, oxo, =NOH, =NOR²², wherein R^{22} is C₁-C₃ alkyl, wherein R^5 , together with R^6 , designates an additional bond between the carbon atoms to which R^5 and R^6 are bound.

9. The method of claim 1, wherein R^6 is hydrogen, or wherein R^6 , together with R^{14} , designates an additional bond between the carbon atoms to which R^6 and R^{14} are bound.

10. The method of claim 1, wherein R^9 is hydrogen, or wherein R^9 , together with R^{10} , designates an additional bond between the carbon atoms to which R^9 and R^{10} are bound.

11. The method of claim 1, wherein R^{10} is hydrogen.

12. The method of claim 1, wherein R^{11} is hydroxy, alkoxy, aralkyloxy, alkoxyalkoxy or alkanoyloxyalkyl, each group comprising a total of up to 10 carbon atoms, C₁-C₄ alkoxy, methoxy, ethoxy, CH₃OCH₂O-, pivaloyloxymethoxy; an acyloxy group derived from an acid having from 1 to 20 carbon atoms, an acyloxy group selected from the group consisting of acetoxy, benzoyloxy, pivaloyloxy, butyryloxy, nicotinoyloxy, isonicotinoyloxy, hemi succinoyloxy, hemi glutaroyloxy, butylcarbamoyloxy, phenylcarbamoyloxy, butoxycarbonyloxy, *tert*-butoxycarbonyloxy and ethoxycarbonyloxy,

13. The method of claim 1, wherein R^{11} is sulphonyloxy, phosphonyloxy, oxo, =NOH, =NOR²⁸, wherein R^{28} is C₁-C₃ alkyl, or wherein R^{11} is halogen, hydroxy and C₁-C₄ alkyl bound to the same carbon atom of the sterol skeleton, or wherein R^{11} , together with R^{12} , designates an additional bond between the carbon atoms to which R^{11} and R^{12} are bound.

5

14. The method of claim 1, wherein R^{12} is hydrogen, C₁-C₃ alkyl, C₁-C₃ alkoxy, or halogen.

15. The method of claim 1, wherein R^{13} is hydrogen, or R^{13} , together with R^{14} , designates an additional bond between the carbon atoms to which R^{13} and R^{14} are bound.

10

16. The method of claim 1, wherein R^{14} is hydrogen.

17. The method of claim 1, wherein R^{15} is hydrogen, C₁-C₄ alkyl, methylene, hydroxy, methoxy, acetoxy, oxo, =NOH, or wherein R^{15} is =NOR²³, and R^{23} is C₁-C₃ alkyl.

15

18. The method of claim 1, wherein R^{16} is hydrogen, C₁-C₃ alkyl, methylene, hydroxy, methoxy, oxo, =NOH, or R^{16} is =NOR²⁴, wherein R^{24} is C₁-C₃ alkyl, or R^{16} , together with R^{17} , designates an additional bond between the carbon atoms to which R^{16} and R^{17} are bound.

20 19. The method of claim 1, wherein R^{17} is hydrogen or hydroxy.

20. The method of claim 1, wherein R^{18} and R^{19} are both hydrogen, both fluoro, or one is fluoro and the other is hydrogen.

25 21. The method of claim 1, wherein R^{25} is hydrogen, C₁-C₄ alkyl, methylene, hydroxy, or oxo.

22. The method of claim 1, wherein A is a carbon atom.

23. The method of claim 1, wherein R^7 is hydrogen, hydroxy, fluoro, or R^7 , together with R^8 , designates an additional bond between the carbon atoms to which R^7 and R^8 are bound.

24. The method of claim 1, wherein R^8 is hydrogen, C_1 - C_4 alkyl, methylene, or halogen

5

25. The method of claim 1, wherein R^{20} is C_1 - C_4 alkyl, trifluoromethyl, or C_3 - C_6 cycloalkyl.

26. The method of claim 1, wherein R^{21} is C_1 - C_4 alkyl, C_1 - C_4 hydroxyalkyl, C_1 - C_4 haloalkyl containing up to three halogen atoms, methoxymethyl, acetoxymethyl, or C_3 - C_6 cycloalkyl.

10

27. The method of claim 1, wherein R^{20} and R^{21} , together with the carbon atom to which they are bound, form a C_3 - C_6 cycloalkyl ring.

28. The method of claim 1, wherein A is a nitrogen atom.

15

29. The method of claim 28, wherein R^8 is hydrogen, C_1 - C_4 alkyl, or oxo.

30. The method of claim 28, wherein R^{20} and R^{21} , independently, are selected from the group consisting of C_1 - C_4 alkyl, cyclopropyl, cyclopentyl and cyclohexyl.

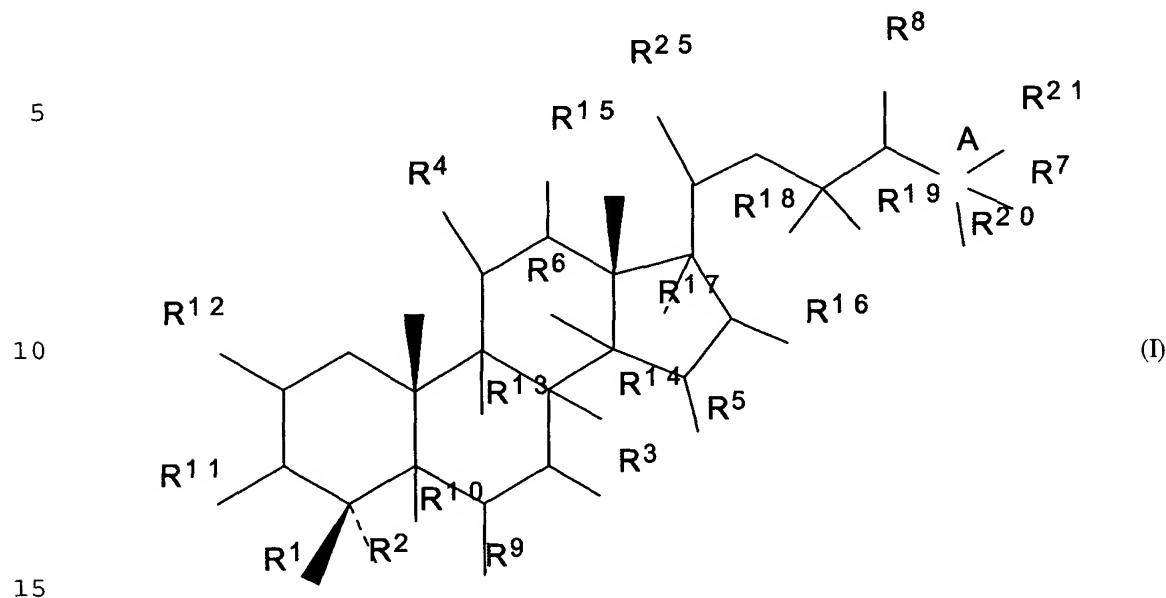
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31. The method of claim 1, wherein the germ cell is an oocyte.

32. The method of claim 31, wherein the compound is administered to an oocyte *ex vivo*.

25 33. The method of claim 31, wherein the germ cell is a male germ cell.

34. A method of producing mature male germ cells by administration of a compound to testicular tissue, wherein the compound is a compound of formula (I)



wherein R^1 and R^2 , independently, are selected from the group consisting of hydrogen and branched or unbranched C_1 - C_6 alkyl which may be substituted by halogen, hydroxy or cyano, or wherein R^1 and R^2 together designate methylene or, together with the carbon atom to which they are bound, form a cyclopropane ring, a cyclopentane ring, or a cyclohexane ring; R^3 is selected from the group consisting of hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, $=NOR^{26}$ wherein R^{26} is hydrogen or C_1 - C_3 alkyl, halogen, and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^3 designates, together with R^9 or R^{14} , an additional bond between the carbon atoms to which R^3 and R^9 or R^{14} are bound; R^4 is selected from the group consisting of hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, $=NOR^{27}$ wherein R^{27} is hydrogen or C_1 - C_3 alkyl, halogen, and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^4 designates, together with R^{13} or R^{15} , an additional bond between the carbon atoms to which R^4 and R^{13} or R^{15} are bound; R^5 is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy, methoxy, oxo, and $=NOR^{22}$ wherein R^{22} is hydrogen or C_1 - C_3 alkyl, or R^5 designates, together with R^6 , an additional bond between the carbon atoms to which R^5 and R^6 are bound; R^6 is hydrogen or R^6 designates, together with R^5 , an additional

bond between the carbon atoms to which R^5 and R^6 are bound; R^9 is hydrogen or R^9 designates, together with R^3 or R^{10} , an additional bond between the carbon atoms to which R^9 and R^3 or R^{10} are bound; R^{10} is hydrogen or R^{10} designates, together with R^9 , an additional bond between the carbon atoms to which R^{10} and R^9 are bound; R^{11} is selected from the group consisting of hydroxy, alkoxy, substituted alkoxy, acyloxy, sulphonyloxy, phosphonyloxy, oxo, $=NOR^{28}$ wherein R^{28} is hydrogen or C_1 - C_3 alkyl, halogen and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^{11} designates, together with R^{12} , an additional bond between the carbon atoms to which R^{11} and R^{12} are bound; R^{12} is selected from the group consisting of hydrogen, C_1 - C_3 alkyl, vinyl, C_1 - C_3 alkoxy and halogen, or R^{12} designates, together with R^{11} , an additional bond between the carbon atoms to which R^{12} and R^{11} are bound; R^{13} is hydrogen or R^{13} designates, together with R^4 or R^{14} , an additional bond between the carbon atoms to which R^{13} and R^4 or R^{14} are bound; R^{14} is hydrogen or R^{14} designates, together with R^3 , R^6 or R^{13} , an additional bond between the carbon atoms to which R^{14} and R^3 or R^6 or R^{13} are bound; R^{15} is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy, methoxy, acetoxy, oxo, and $=NOR^{23}$ wherein R^{23} is hydrogen or C_1 - C_3 alkyl, or R^{15} designates, together with R^4 , an additional bond between the carbon atoms to which R^{15} and R^4 are bound; R^{16} is selected from the group consisting of hydrogen, C_1 - C_3 alkyl, methylene, hydroxy, methoxy, oxo and $=NOR^{24}$ wherein R^{24} is hydrogen or C_1 - C_3 alkyl, or R^{16} designates, together with R^{17} , an additional bond between the carbon atoms to which R^{16} and R^{17} are bound; R^{17} is hydrogen or hydroxy or R^{17} designates, together with R^{16} , an additional bond between the carbon atoms to which R^{17} and R^{16} are bound; R^{18} and R^{19} are, independently, hydrogen or fluoro; R^{25} is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy and oxo; A is a carbon atom or a nitrogen atom; when A is a carbon atom, R^7 is selected from the group consisting of hydrogen, hydroxy and fluoro, and R^8 is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene and halogen, or R^7 designates, together with R^8 , an additional bond between the carbon atoms to which R^7 and R^8 are bound; R^{20} is selected from the group consisting of C_1 - C_4 alkyl, trifluoromethyl and C_3 - C_6 cycloalkyl and R^{21} is selected from the group consisting of C_1 - C_4 alkyl, C_1 - C_4 hydroxyalkyl, C_1 - C_4 haloalkyl containing up to three halogen atoms,

methoxymethyl, acetoxymethyl, and C₃-C₆ cycloalkyl, or R²⁰ and R²¹, together with the carbon atom to which they are bound, form a C₃-C₆ cycloalkyl ring; and when A is a nitrogen atom, R⁷ designates a lone pair of electrons and R⁸ is selected from the group consisting of hydrogen, C₁-C₄ alkyl and oxo; R²⁰ and R²¹ are, independently, C₁-C₄ alkyl or C₃-C₆ cycloalkyl; provided that the compound of formula (I) does

5 not have any cumulated double bonds and further provided that the compound is not one of the following compounds:

Cholest-7-ene-3β-ol; 4-Methylcholest-7-ene-3β-ol; 4-Ethylcholest-7-ene-3β-ol; 4,4-Dimethylcholest-7-ene-3β-ol; 4α-Methyl-4β-ethylcholest-7-ene-3β-ol; 4α-Ethyl-4β-methylcholest-7-ene-3β-ol; 4,4-Diethylcholest-7-ene-3β-ol; 4-Propylcholest-7-ene-3β-ol; 4-Butylcholest-7-ene-3β-ol; 4-Isobutylcholest-7-ene-3β-ol; 4,4-Tetramethylencholest-7-ene-3β-ol; 4,4-Pentamethylencholest-7-ene-3β-ol; Cholest-8-ene-3β-ol;

10 4-Methylcholest-8-ene-3β-ol; 4-Ethylcholest-8-ene-3β-ol; 4,4-Dimethylcholest-8-ene-3β-ol; 4α-Methyl-4β-ethylcholest-8-ene-3β-ol; 4α-Ethyl-4β-methylcholest-8-ene-3β-ol; 4,4-Diethylcholest-8-ene-3β-ol; 4-Propylcholest-8-ene-3β-ol; 4-Butylcholest-8-ene-3β-ol; 4-Isobutylcholest-8-ene-3β-ol; 4,4-Tetramethylencholest-8-ene-3β-ol; 4,4-Pentamethylencholest-8-ene-3β-ol; Cholest-8(14)-ene-3β-ol;

15 4-Methylcholest-8(14)-ene-3β-ol; 4-Ethylcholest-8(14)-ene-3β-ol; 4,4-Dimethylcholest-8(14)-ene-3β-ol; 4α-Methyl-4β-ethylcholest-8(14)-ene-3β-ol; 4α-Ethyl-4β-methylcholest-8(14)-ene-3β-ol; 4,4-Diethylcholest-8(14)-ene-3β-ol; 4-Propylcholest-8(14)-ene-3β-ol; 4-Butylcholest-8(14)-ene-3β-ol; 4-Isobutylcholest-8(14)-ene-3β-ol; 4,4-Tetramethylencholest-8(14)-ene-3β-ol; 4,4-Pentamethylencholest-8(14)-ene-3β-ol; Cholesta-8,14-diene-3β-ol; 4-Methylcholesta-8,14-diene-3β-ol; 4-Ethylcholesta-8,14-diene-3β-ol; 4,4-Dimethylcholesta-8,14-diene-3β-ol; 4α-Methyl-4β-ethylcholesta-8,14-diene-3β-ol; 4α-Ethyl-4β-methylcholesta-8,14-diene-3β-ol; 4,4-Diethylcholesta-8,14-diene-3β-ol; 4-Propylcholesta-8,14-diene-3β-ol;

20 4-Butylcholesta-8,14-diene-3β-ol; 4-Isobutylcholesta-8,14-diene-3β-ol; 4,4-Tetramethylencholesta-8,14-diene-3β-ol; 4,4-Pentamethylencholesta-8,14-diene-3β-ol; Cholesta-8,24-diene-3β-ol; 4-Methylcholesta-8,24-diene-3β-ol; 4-Ethylcholesta-8,24-diene-3β-ol; 4,4-Dimethylcholesta-8,24-diene-3β-ol; 4α-Methyl-4β-ethylcholesta-8,24-diene-3β-ol; 4α-Ethyl-4β-methylcholesta-8,24-diene-3β-ol; 4,4-Diethylcholesta-8,24-diene-3β-ol; 4-Propylcholesta-8,24-diene-3β-ol; 4-Butylcholesta-8,24-diene-3β-ol; 4-Isobutylcholesta-8,24-diene-3β-ol;

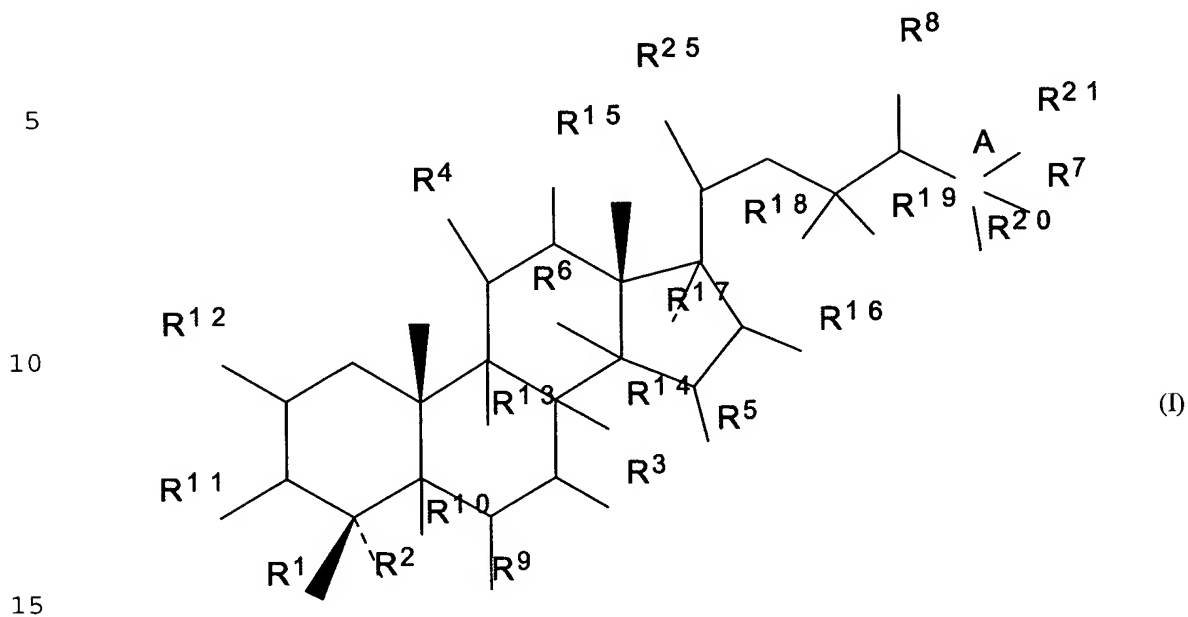
25 4,4-Tetramethylencholesta-8,24-diene-3β-ol; 4,4-Pentamethylencholesta-8,24-diene-3β-ol; Cholesta-8,14,24-triene-3β-ol; 4-Methylcholesta-8,14,24-triene-3β-ol; 4-Ethylcholesta-8,14,24-triene-3β-ol; 4,4-

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Dimethylcholesta-8,14,24-triene-3 β -ol; 4 α -Methyl-4 β -ethylcholesta-8,14,24-triene-3 β -ol; 4 α -Ethyl-4 β -methylcholesta-8,14,24-triene-3 β -ol; 4,4-Diethylcholesta-8,14,24-triene-3 β -ol; 4-Propylcholesta-8,14,24-triene-3 β -ol; 4-Butylcholesta-8,14,24-triene-3 β -ol; 4-Isobutylcholesta-8,14,24-triene-3 β -ol; 4,4-Tetramethylencholesta-8,14,24-triene-3 β -ol; and 4,4-Pentamethylencholesta-8,14,24-triene-3 β -ol;

5 and esters and ethers thereof.

36. A method of promoting meiotic maturation in an oocyte, comprising culturing the oocyte in the presence of a compound of formula (I)



wherein R^1 and R^2 , independently, are selected from the group consisting of hydrogen and branched or unbranched C_1 - C_6 alkyl which may be substituted by halogen, hydroxy or cyano, or wherein R^1 and R^2 together designate methylene or, together with the carbon atom to which they are bound, form a cyclopropane ring, a cyclopentane ring, or a cyclohexane ring; R^3 is selected from the group consisting of hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, $=NOR^{26}$ wherein R^{26} is hydrogen or C_1 - C_3 alkyl, halogen, and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^3 designates, together with R^9 or R^{14} , an additional bond between the carbon atoms to which R^3 and R^9 or R^{14} are bound; R^4 is selected from the group consisting of hydrogen, methylene, hydroxy, methoxy, acetoxy, oxo, $=NOR^{27}$ wherein R^{27} is hydrogen or C_1 - C_3 alkyl, halogen, and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^4 designates, together with R^{13} or R^{15} , an additional bond between the carbon atoms to which R^4 and R^{13} or R^{15} are bound; R^5 is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy, methoxy, oxo, and $=NOR^{22}$ wherein R^{22} is hydrogen or C_1 - C_3 alkyl, or R^5 designates, together with R^6 , an additional bond between the carbon

atoms to which R^5 and R^6 are bound; R^6 is hydrogen or R^6 designates, together with R^5 , an additional bond between the carbon atoms to which R^5 and R^6 are bound; R^9 is hydrogen or R^9 designates, together with R^3 or R^{10} , an additional bond between the carbon atoms to which R^9 and R^3 or R^{10} are bound; R^{10} is hydrogen or R^{10} designates, together with R^9 , an additional bond between the carbon atoms to which R^{10} and R^9 are bound; R^{11} is selected from the group consisting of hydroxy, alkoxy, substituted alkoxy, acyloxy, sulphonyloxy, phosphonyloxy, oxo, $=NOR^{28}$ wherein R^{28} is hydrogen or C_1 - C_3 alkyl, halogen and hydroxy and C_1 - C_4 alkyl bound to the same carbon atom of the sterol skeleton, or R^{11} designates, together with R^{12} , an additional bond between the carbon atoms to which R^{11} and R^{12} are bound; R^{12} is selected from the group consisting of hydrogen, C_1 - C_3 alkyl, vinyl, C_1 - C_3 alkoxy and halogen, or R^{12} designates, together with R^{11} , an additional bond between the carbon atoms to which R^{12} and R^{11} are bound; R^{13} is hydrogen or R^{13} designates, together with R^4 or R^{14} , an additional bond between the carbon atoms to which R^{13} and R^4 or R^{14} are bound; R^{14} is hydrogen or R^{14} designates, together with R^3 , R^6 or R^{13} , an additional bond between the carbon atoms to which R^{14} and R^3 or R^6 or R^{13} are bound; R^{15} is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene, hydroxy, methoxy, acetoxy, oxo, and $=NOR^{23}$ wherein R^{23} is hydrogen or C_1 - C_3 alkyl, or R^{15} designates, together with R^4 , an additional bond between the carbon atoms to which R^{15} and R^4 are bound; R^{16} is selected from the group consisting of hydrogen, C_1 - C_3 alkyl, methylene, hydroxy, methoxy, oxo and $=NOR^{24}$ wherein R^{24} is hydrogen or C_1 - C_3 alkyl, or R^{16} designates, together with R^{17} , an additional bond between the carbon atoms to which R^{16} and R^{17} are bound; R^{17} is hydrogen or hydroxy or R^{17} designates, together with R^{16} , an additional bond between the carbon atoms to which R^{17} and R^{16} are bound; R^{18} and R^{19} are, independently, hydrogen or fluoro; R^{25} is selected from the group consisting of hydrogen, C_{1-4} alkyl, methylene, hydroxy and oxo; A is a carbon atom or a nitrogen atom; when A is a carbon atom, R^7 is selected from the group consisting of hydrogen, hydroxy and fluoro, and R^8 is selected from the group consisting of hydrogen, C_1 - C_4 alkyl, methylene and halogen, or R^7 designates, together with R^8 , an additional bond between the carbon atoms to which R^7 and R^8 are bound; R^{20} is selected from the group consisting of C_1 - C_4 alkyl, trifluoromethyl and C_3 - C_6 cycloalkyl and R^{21} is selected from the group

consisting of C₁-C₄ alkyl, C₁-C₄ hydroxyalkyl, C₁-C₄ haloalkyl containing up to three halogen atoms, methoxymethyl, acetoxymethyl, and C₃-C₆ cycloalkyl, or R²⁰ and R²¹, together with the carbon atom to which they are bound, form a C₃-C₆ cycloalkyl ring; and when A is a nitrogen atom, R⁷ designates a lone pair of electrons and R⁸ is selected from the group consisting of hydrogen, C₁-C₄ alkyl and oxo; R²⁰ and R²¹ are, independently, C₁-C₄ alkyl or C₃-C₆ cycloalkyl; provided that the compound of formula (I) does not have any cumulated double bonds and further provided that the compound is not one of the following compounds:

- Cholest-7-ene-3 β -ol; 4-Methylcholest-7-ene-3 β -ol; 4-Ethylcholest-7-ene-3 β -ol; 4,4-Dimethylcholest-7-ene-3 β -ol; 4 α -Methyl-4 β -ethylcholest-7-ene-3 β -ol; 4 α -Ethyl-4 β -methylcholest-7-ene-3 β -ol; 4,4-Diethylcholest-7-ene-3 β -ol; 4-Propylcholest-7-ene-3 β -ol; 4-Butylcholest-7-ene-3 β -ol; 4-Isobutylcholest-7-ene-3 β -ol; 4,4-Tetramethylencholest-7-ene-3 β -ol; 4,4-Pentamethylencholest-7-ene-3 β -ol; Cholest-8-ene-3 β -ol; 4-Methylcholest-8-ene-3 β -ol; 4-Ethylcholest-8-ene-3 β -ol; 4,4-Dimethylcholest-8-ene-3 β -ol; 4 α -Methyl-4 β -ethylcholest-8-ene-3 β -ol; 4 α -Ethyl-4 β -methylcholest-8-ene-3 β -ol; 4,4-Diethylcholest-8-ene-3 β -ol; 4-Propylcholest-8-ene-3 β -ol; 4-Butylcholest-8-ene-3 β -ol; 4-Isobutylcholest-8-ene-3 β -ol; 4,4-Tetramethylencholest-8-ene-3 β -ol; 4,4-Pentamethylencholest-8-ene-3 β -ol; Cholest-8(14)-ene-3 β -ol; 4-Methylcholest-8(14)-ene-3 β -ol; 4-Ethylcholest-8(14)-ene-3 β -ol; 4,4-Dimethylcholest-8(14)-ene-3 β -ol; 4 α -Methyl-4 β -ethylcholest-8(14)-ene-3 β -ol; 4 α -Ethyl-4 β -methylcholest-8(14)-ene-3 β -ol; 4,4-Diethylcholest-8(14)-ene-3 β -ol; 4-Propylcholest-8(14)-ene-3 β -ol; 4-Butylcholest-8(14)-ene-3 β -ol; 4-Isobutylcholest-8(14)-ene-3 β -ol; 4,4-Tetramethylencholest-8(14)-ene-3 β -ol; 4,4-Pentamethylencholest-8(14)-ene-3 β -ol; Cholesta-8,14-diene-3 β -ol; 4-Methylcholesta-8,14-diene-3 β -ol; 4-Ethylcholesta-8,14-diene-3 β -ol; 4,4-Dimethylcholesta-8,14-diene-3 β -ol; 4 α -Methyl-4 β -ethylcholesta-8,14-diene-3 β -ol; 4 α -Ethyl-4 β -methylcholesta-8,14-diene-3 β -ol; 4,4-Diethylcholesta-8,14-diene-3 β -ol; 4-Propylcholesta-8,14-diene-3 β -ol; 4-Butylcholesta-8,14-diene-3 β -ol; 4-Isobutylcholesta-8,14-diene-3 β -ol; 4,4-Tetramethylencholesta-8,14-diene-3 β -ol; 4,4-Pentamethylencholesta-8,14-diene-3 β -ol; Cholesta-8,24-diene-3 β -ol; 4-Methylcholesta-8,24-diene-3 β -ol; 4-Ethylcholesta-8,24-diene-3 β -ol; 4,4-Dimethylcholesta-8,24-diene-3 β -ol; 4 α -Methyl-4 β -ethylcholesta-8,24-diene-3 β -ol; 4 α -Ethyl-4 β -methylcholesta-8,24-diene-3 β -ol; 4,4-Diethylcholesta-8,24-diene-3 β -ol; 4-Propylcholesta-8,24-diene-3 β -ol; 4-Butylcholesta-8,24-diene-3 β -ol; 4-Isobutylcholesta-8,24-diene-3 β -ol;

4,4-Tetramethylencholesta-8,24-diene-3 β -ol; 4,4-Pentamethylencholesta-8,24-diene-3 β -ol; Cholesta-8,14,24-triene-3 β -ol; 4-Methylcholesta-8,14,24-triene-3 β -ol; 4-Ethylcholesta-8,14,24-triene-3 β -ol; 4,4-Dimethylcholesta-8,14,24-triene-3 β -ol; 4 α -Methyl-4 β -ethylcholesta-8,14,24-triene-3 β -ol; 4 α -Ethyl-4 β -methylcholesta-8,14,24-triene-3 β -ol; 4,4-Diethylcholesta-8,14,24-triene-3 β -ol; 4-Propylcholesta-8,14,24-triene-3 β -ol; 4-Butylcholesta-8,14,24-triene-3 β -ol; 4-Isobutylcholesta-8,14,24-triene-3 β -ol; 4,4-Tetramethylencholesta-8,14,24-triene-3 β -ol; and 4,4-Pentamethylencholesta-8,14,24-triene-3 β -ol; and esters and ethers thereof.